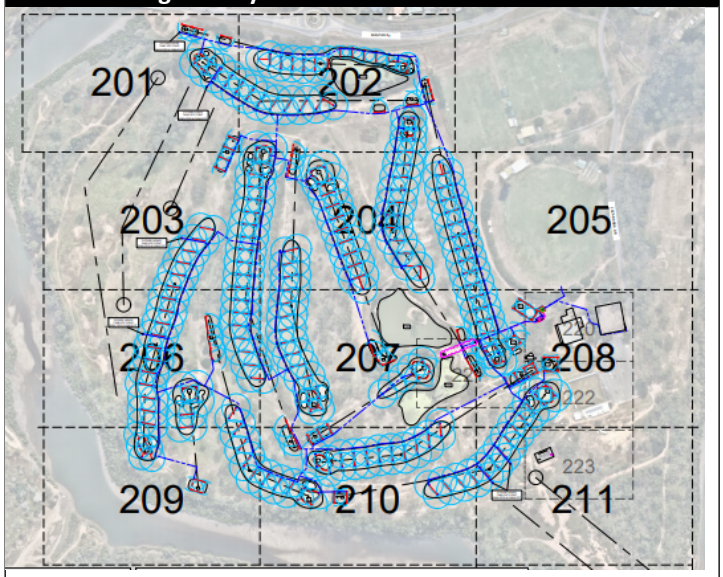
Concept Design Components Summary

BITS Golf Irrigation System



Description

- Concept design covers the existing 13 holes and 5 additional holes at the request of the club*. It is not proposed that the additional holes are constructed but they were considered in the design to ensure sufficient capacity in the system.
- Allows for an irrigation window of 7pm to 4am (9 hours)
- Automated system
- New shed and pump/filter system
- Concept design considers two potential rotors (Rain Bird and Toro)
- Peak Flow Demand for recycled water 22 L/s
- Average annual volume for recycled water supply 66 ML
- Includes a backup potable water supply to water greens and tees at the request of the clubs

Associated Costs

CAPEX

Irrigation System – existing 13 holes	$769,500
Pump & Filter System	$110,000
New pump slab, shed and electrical – 50% contribution	$22,500
Reroute RW pipe to PS suction & disconnect existing PS	$20,000
Potable Water Supply backup	$11,900
Tender assessment and project management	$95,000
Contingency and price rises	$95,000
CAPEX TOTAL	$1,123,900**
*Irrigation System – addition 5 holes	$297,000*

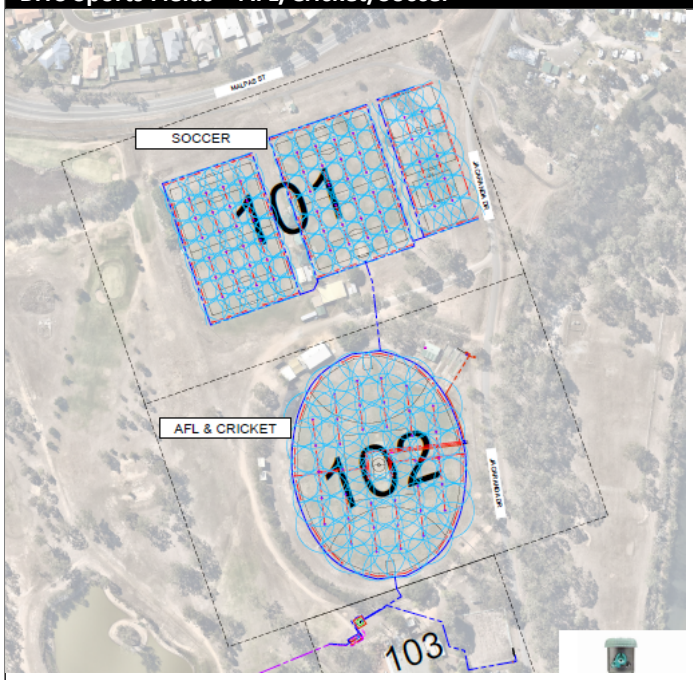
**Potential savings can be found in detailed design

OPEX

Power (pump)	$ 5,070
Operator labour costs – GRC to monitor system & make minor adjusments	$ 9,600
Maintenance Costs (excludes depreciation, repairs or spare parts, unlikely to be significant in the first 5 years)	$ 7,680
OPEX TOTAL	$ 22,350 #

Assumes that recycled water is supplied at no cost to clubs; Potable water costs for use within the back-up system is excluded (Concession would apply); Excludes depreciation, repairs or spare parts (unlikely to be significant in the first 5 years). Design life for key components varies from 10 to 50 years.

BITS Sports Fields – AFL/Cricket/Soccer



Description

- Concept Design covers the existing sports fields and a design was incorporated for an additional junior field at BITS Soccer Club at the request of BITS Soccer.
- Allows for an irrigation window of 8.30pm to 3am (6.5 hours)
- Automated system dependent on operating model for the irrigation system (clubs vs Council)
- New shed and pump/filter system – proposed that the shed will be shared with BITS Golf with separate pumping systems.
- Concept design considers two potential rotors (Rain Bird and Toro)
- Peak Flow Demand for recycled water 10 L/s
- Average annual volume for recycled water supply 22 ML/y
- Includes a backup potable water supply at the request of the clubs

Associated Costs

CAPEX

Irrigation System – existing fields	$207,057
Irrigation System – proposed new junior field	$ 10,867
Pump & Filter System	$ 70,000
New pump slab, shed and electrical – 50% contribution	$ 22,500
Potable Water Supply backup	$ 23,100
Tender assessment and project management	$ 35,000
Contingency and price rises	$ 35,000
CAPEX TOTAL	$403,525**

**Potential savings can be found in detailed design

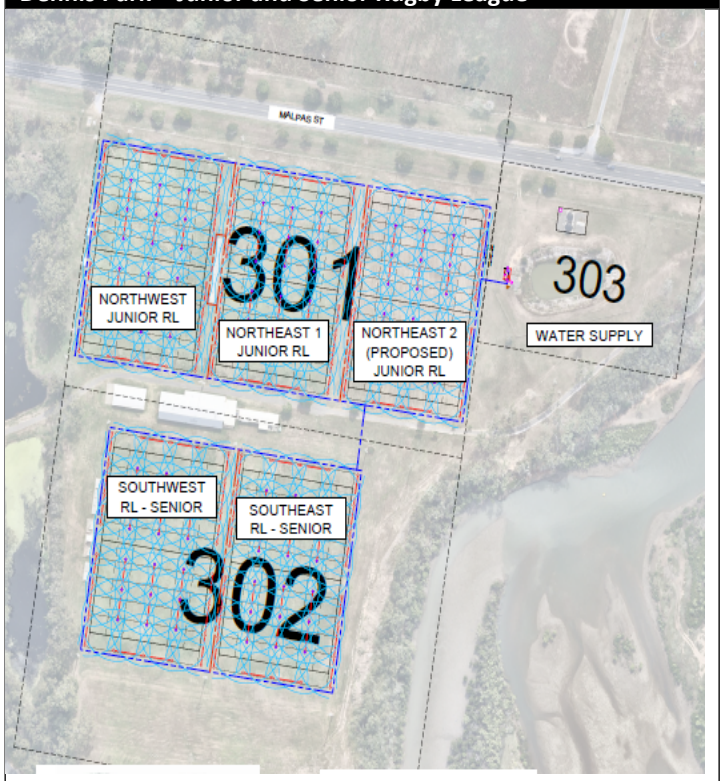
OPEX

Power (pump)*	$ 1,690
Operator labour costs – GRC to monitor system & make minor adjustments	$ 7,200
Maintenance Costs (excludes depreciation, repairs or spare parts, unlikely to be significant in the first 5 years)	$ 5,120
OPEX TOTAL	$ 14,010 #

*Power costs to be shared between Soccor/AFL/Cricket dependent on effluent consumption.

Assumes that recycled water is supplied at no cost to clubs; Potable water costs for use within the back-up system is excluded (Concession would apply); Excludes depreciation, repairs or spare parts (unlikely to be significant in the first 5 years). Design life for key components varies from 10 to 50 years.

Dennis Park – Junior and Senior Rugby League



Description

- Concept Design covers the existing sports fields and a design was incorporated for an additional junior field at the request of Junior Rugby League.
- Allows for an irrigation window of 8.30pm to 3am (6.5 hours)
- Automated system dependent on operating model for the irrigation system (clubs vs Council)
- New shed and pump/filter system – proposed to reuse the existing storage tanks
- Concept design considers two potential rotors (Rain Bird and Toro)
- Peak Flow Demand for recycled water 10 L/s
- Average annual volume for recycled water supply 25 ML/y
- Design does not includes a backup potable water supply as this was not identified as a requirement by the club however the club has since requested that a backup potable water supply be investigated and this will be considered during detailed design.

Through the stakeholder engagement Rugby League requested that Council investigate cost savings associated with retaining the existing pumps and irrigation system and adding an extension. This option was investigated during concept design and while it did realise immediate CAPEX savings, was found to not meet the specified selection criteria for performance and is not recommended.

Associated Costs

CAPEX

Irrigation System – existing fields	$195,040
Irrigation System – proposed new junior field	$ 48,760
Pump & Filter System	$ 75,000
New pump slab, shed and electrical – 50% contribution	$ 38,000
Tender assessment and project management	$ 35,000
Contingency and price rises	$ 35,000
CAPEX TOTAL	$426,800**

**Potential savings can be found in detailed design

OPEX

Power (pump)*	$ 1,888
Operator labour costs – GRC to monitor system & make minor adjustments	$ 7,200
Maintenance Costs (excludes depreciation, repairs or spare parts, unlikely to be significant in the first 5 years)	$ 5,120
OPEX TOTAL	$ 14,208 #

*Power costs to be shared between Junior and Senior Rugby League dependent on effluent consumption.

Assumes that recycled water is supplied at no cost to clubs; Potable water costs for use within the back-up system is excluded (Concession would apply); Excludes depreciation, repairs or spare parts (unlikely to be significant in the first 5 years). Design life for key components varies from 10 to 50 years.